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Case 6741

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the Application of :  
B. J. ROSELLE ET AL. : **BEFORE THE BOARD OF APPEALS**  
Serial No. 09/446,202 : Group Art Unit 1761  
Filed December 16, 1999 : Examiner H. Pratt  
For MICROORGANISM :  
REDUCTION METHODS AND  
COMPOSITIONS FOR FOOD

**APPEAL BRIEF**

Box AF

Commissioner for Patents

Washington, D.C. 20231

Dear Sir:

Appellants appealed to the Board of Appeals by filing a Notice of Appeal, dated November 20, 2001, received by the USPTO on January 7, 2002, from the final rejection of Claims 1-21, as contained in the final Office Action dated July 20, 2001 (Paper No. 9) and Advisory Action dated January 17, 2002 (Paper No. 16) of the Primary Examiner. This Appeal Brief is being submitted in triplicate. The Commissioner is hereby authorized to charge any necessary fees, which Appellants believe to be \$920.00 for a three-month extension of time, to Deposit Account No. 16-2480.

**(1) REAL PARTY IN INTEREST**

The real party in interest is The Procter & Gamble Company, a corporation of The State of Ohio, having a place of business at Cincinnati, Ohio 45202.

**(2) RELATED APPEALS AND INTERFERENCES**

An appeal was filed in U.S. Application Serial No. 09/186,206 (Attorney Docket #5745C2), which contains some legal issues similar to those in the present appeal, although the claims are differing in scope. In the '206 application, an Appeal Brief was filed March 18, 2002. It is Appellants' understanding that prosecution of the '206 application has been re-opened by the Examiner in view of the Appeal Brief submitted.

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**(3) STATUS OF CLAIMS**

Claims 1-21 are pending and have been appealed. A copy of the appealed Claims 1-21 is attached as APPENDIX I.

**(4) STATUS OF AMENDMENTS**

All amendments have been entered.

**(5) SUMMARY OF INVENTION**

The present invention relates to methods for treating food to reduce the level of microorganisms on the surface of the food and make it safe to eat comprising the steps of contacting the surface of the food with an aqueous dilute treatment composition comprising toxicologically-acceptable basic buffer to provide a pH of greater than about 10.5 for a period of time in excess of about one half of a minute. The composition is essentially free of any material that adversely affects safety or palatability so that the food does not need to be rinsed before consumption. The composition can optionally further comprise toxicologically-acceptable detergent surfactant. The composition is allowed to remain on the surface for a period of time sufficient to effect a significant reduction in microorganisms as compared to the same method wherein the solution is immediately removed from the surfaces.

The present invention combines three important elements—toxicologically-acceptable basic buffer, composition pH, and contact time—to provide significant reduction of microorganisms on surfaces of food.

In a preferred aspect, the present methods utilize an aqueous treatment composition for contacting the surfaces of food which comprises: (a) less than about 0.2% by weight and sufficient to reduce the viscosity of said solution to less than about 50 cp., of toxicologically-acceptable base-stable anionic detergent surfactant; (b) toxicologically-acceptable basic buffer selected from the group consisting of water soluble potassium and/or sodium, hydroxides, orthophosphates, and/or carbonates, to provide a pH of from about 10.9 to about 12.5; and (c) optionally, from about 0.001% to about 1% by weight said calcium ion sequestrant, which is selected from the group consisting of sodium and/or tripolyphosphate, ethylenediaminetetraacetate, citrate, and mixtures thereof.

The present invention further relates to certain dilute and concentrated treatment compositions.

**(6) ISSUE**

Are Claims 1-21 unobvious under 35 U.S.C. § 103(a) and patentable over Murch et al., U.S. Patent No. 5,498,295?

A copy of the reference is attached as APPENDIX II.

**(7) GROUPING OF CLAIMS**

Claims 1 and 7 stand or fall together. Claims 12-13, 15-19, and 21 stand or fall together. Each of Claims 2, 3, 4, 5, 6, 8, 9, 10, 11, 14, and 20 should each be considered separately, as each claim requires certain additional elements not taught or suggested by the cited reference.

**(8) ARGUMENT**

Are Claims 1-21 unobvious under 35 U.S.C. § 103(a) and patentable over Murch et al., U.S. Patent No. 5,498,295?

Claims 1-21 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over Murch et al., U.S. Patent No. 5,498,295. Appellants respectfully traverse this rejection. Murch et al. disclose basic cleaning compositions containing toxicologically-acceptable ingredients for cleaning fruits and vegetables. The preferred compositions comprise oleate, alcohol ethoxylates and buffers. Murch et al. disclose that its compositions and processes, especially those that are alkaline, can provide effective disinfectancy. Col. 11, lines 4-10.

The present invention relates to a method of reducing the level of microorganisms on the surface of food and make it safe to eat, by contacting the surface of the food with an aqueous dilute composition for a period of time in excess of about one half of a minute. The Office Action notes that "[t]he reference discloses that the disinfectant is provided but doesn't say how long the composition is to remain on the food produce as in claim 1 and 2." OFFICE ACTION (Paper No. 7) at 3. Indeed, all the reference discloses is that its compositions and processes, especially those that are alkaline, *can* provide effective disinfectancy, but provides no details on how disinfectancy is achieved. Murch et al. thus do not teach or suggest a method for reducing microorganisms on the surface of food as presently claimed.

The Examples of the present invention show the importance of pH of the aqueous dilute treatment composition and the period of time the composition is allowed to remain in contact with the surface of the food, before being consumed. Murch et al. do not teach or recognize the importance of both pH and time in achieving a reduction of microorganisms on the surface of food. While Murch et al. suggest that alkaline compositions can provide disinfectancy, it does not disclose or suggest the period of contact time needed to achieve the reduction of microorganisms, as presently claimed.

The Office Action asserts that "Applicants are recognizing and giving weight to an inherent characteristic of the composition, and nothing new or unobvious is seen in this." OFFICE ACTION (Paper No. 9) at 3. Appellants' submit that by relying on the doctrine of inherency, obviousness under 35 U.S.C. § 103 is being confused with anticipation under 35 U.S.C. § 102.

*See, e.g., In re Rijckaert*, 28 U.S.P.Q.2d 1955 (Fed. Cir. 1993) (“[A] retrospective view of inherency is not a substitute for some teaching or suggestion supporting an obviousness rejection”). Furthermore, Appellants respectfully point out that Claims 1-7 relate to methods of treating food to reduce the level of microorganisms on the surface of the food to make it safe to eat, as opposed to compositions themselves.

As the United States Court of Appeals for the Federal Circuit recently stated in *In re Robertson*:

To establish inherency, the extrinsic evidence “must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991). “Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Id.* at 1269, 20 U.S.P.Q.2d at 1749 (quoting *In re Oelrich*, 666 F.2d 578, 581, 212 U.S.P.Q. 323, 326 (C.C.P.A. 1981).

49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). Here, Murch et al. do not teach or suggest that by contacting a surface with a composition comprising toxicologically-acceptable basic buffer to provide a pH of greater than about 10.5 and, optionally, toxicologically-acceptable detergent surfactant, for a period of time in excess of about one half of a minute will reduce microorganisms on the treated surface, as presently claimed. Since inherency may not be established by mere “probabilities or possibilities,” the present methods are not inherently disclosed by Murch et al. *See id.* Also, Murch et al. provide no suggestion or motivation to leave their composition on a surface for at least one half of a minute in order to achieve a significant reduction in microorganisms on the treated surface.

In any event, Murch et al. do not teach or suggest, either expressly or inherently, a method of reducing the level of microorganisms on a surface of food by contacting the surface with the composition for at least one half of a minute. The present invention involves the factor of time in order to achieve the reduction of microorganisms on a surface being contacted with the composition, which is not taught or recognized by Murch et al. Furthermore, “[t]hat which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown.” *In re Spormann*, 150 U.S.P.Q. 449, 452 (C.C.P.A. 1966). Murch et al. does not disclose or suggest that the element of time has anything to do with disinfectancy. Therefore, Appellants submit that Murch et al. do not teach or suggest the presently claimed method, which

requires both a highly alkaline composition and a period of contact time in order to achieve the reduction in microorganisms on the surface of food.

Furthermore, with respect to Claims 2 and 8, Murch et al. do not disclose or suggest dilute treatment solutions comprising low levels of anionic surfactant as presently claimed. While Murch et al. teach anionic surfactants as optional materials (*see* col. 8, lines 48-56), Murch et al. do not teach or suggest any particular levels of such materials. As such, Murch et al. does not suggest the presently claimed dilute treatment compositions, which require low levels of anionic surfactants.

With respect to Claims 4, 5, 6, 10 and 11, Murch et al. do not teach or suggest compositions that comprise less than about 0.1% of toxicologically-acceptable base-stable sodium and/or potassium alkyl sulfate and/or C<sub>8-14</sub> soap to reduce the viscosity of the solution to less than about 10 cp (Claims 4 and 10) or less than about 5 cp (Claims 5, 6, and 11). Indeed, Murch et al. teach that its compositions have a viscosity of “more than about 5, preferably more than about 10, more preferably more than about 50 centipoise when at rest”. Furthermore, Murch et al. do not teach or suggest levels of toxicologically-acceptable base-stable sodium and/or potassium alkyl sulfate and/or C<sub>8-14</sub> soap of less than about 0.1%, as required by the claim.

With regard to Claim 12, Murch et al. do not teach or suggest compositions that comprise orthophosphate and therefore do not teach or suggest certain levels of orthophosphate, when present.

With regard to Claim 14, Murch et al. do not teach or suggest compositions comprising a calcium ion sequestrant which is sodium and/or potassium tripolyphosphate and/or ethylenediaminetetraacetate, as required by the claim.

With respect to Claim 20, Murch et al. do not teach or suggest compositions comprising a toxicologically-acceptable suds suppressor, as required by the claim.


For the reasons discussed *supra*, Appellants thus submit that Claims 1-21 are unobvious and patentable over Murch et al. under 35 U.S.C. § 103(a).

In view of the foregoing remarks, it is respectfully submitted that all claims are allowable.  
Accordingly, Appellants respectfully request reversal of all rejections.

Respectfully submitted,

B. J. ROSELLE ET AL.

By

  
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June 7, 2002  
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## **APPENDIX I**

### **Case 6741 - Appealed Claims**

1. A method for treating food to reduce the level of microorganisms on the surface of said food and make it safe to eat, said method comprising treatment occurring just prior to consumption, comprising the step of contacting the surface of said food with an aqueous dilute treatment composition comprising toxicologically-acceptable basic buffer to provide a pH of greater than about 10.5 and, optionally, toxicologically-acceptable detergent surfactant, for a period of time in excess of about one half of a minute, the composition being essentially free of any material that adversely affects safety or palatability, so that said food does not need to be rinsed before consumption.
2. The method of Claim 1 wherein said aqueous dilute treatment composition comprises:
  - (a) less than about 0.5% by weight of toxicologically-acceptable base-stable anionic detergent surfactant;
  - (b) toxicologically-acceptable basic buffer selected from the group consisting of water soluble potassium and/or sodium and/or calcium hydroxides, ortho-phosphates, carbonates, and/or bicarbonates, to provide a pH of from about 10.5 to about 13
  - (c) optionally, from about 0.0005% to about 3% by weight of calcium ion sequestrant selected from the group consisting of water soluble salts of polyphosphates, organic polycarboxylic acid, and mixtures thereof;
  - (d) optionally, toxicologically-acceptable preservative;
  - (e) optionally, toxicologically acceptable suds suppresser; and
  - (f) the balance comprising an aqueous carrier selected from water and, optionally, containing a low level of low molecular weight, toxicologically-acceptable organic solvent.
3. The method of Claim 2 wherein said aqueous treatment composition comprises:
  - (a) less than about 0.2% by weight and sufficient to reduce the viscosity of said solution to less than about 50 cp., of toxicologically-acceptable base-stable anionic detergent surfactant;
  - (b) toxicologically-acceptable basic buffer selected from the group consisting of water soluble potassium and/or sodium, hydroxides, ortho-phosphates, and/or carbonates, to provide a pH of from about 10.9 to about 12.5; and

- (c) optionally, from about 0.001% to about 1% by weight said calcium ion sequestrant, which is selected from the group consisting of sodium and/or tripolyphosphate, ethylenediaminetetraacetate, citrate, and mixtures thereof.
4. The method of Claim 2 wherein said aqueous treatment composition comprises:
- (a) less than about 0.1% by weight and sufficient to reduce the viscosity of said solution to less than about 10 cp., of toxicologically-acceptable base-stable sodium and/or potassium alkyl sulfate and/or C<sub>8-14</sub> soap;
  - (b) toxicologically-acceptable basic buffer selected from the group consisting of water soluble potassium and/or sodium ortho-phosphates and/or carbonates, to provide a pH of from about 11.3 to about 12.3; and
  - (c) optionally, from about 0.01% to about 0.5% by weight of salt of organic polycarboxylic acid.
5. The method of Claim 4 wherein said aqueous treatment composition comprises:
- (a) less than about 0.1% by weight and sufficient to reduce the viscosity of said solution to less than about 5 cp., of toxicologically-acceptable base-stable sodium and/or potassium alkyl sulfate and/or C<sub>8-14</sub> soap; and
  - (c) optionally, from about 0.01% to about 0.2% by weight of sodium ethylenediaminetetraacetate.
6. The method of Claim 2 wherein said aqueous treatment composition comprises:
- (a) less than about 0.1% by weight and sufficient to reduce the viscosity of said solution to less than about 5 cp., of toxicologically-acceptable base-stable sodium and/or potassium alkyl sulfate and/or C<sub>8-14</sub> soap; and
  - (c) optionally, from about 0.01% to about 1% by weight of sodium tripolyphosphate.
7. The method of Claim 1 wherein said treatment composition is made by diluting a concentrated composition with water containing microorganisms, the concentrate being used at a level of from about 0.1% to about 5% by weight of the dilute aqueous treatment composition.
8. An aqueous dilute treatment solution comprising:
- (a) less than about 0.5% by weight of toxicologically-acceptable base-stable anionic detergent surfactant;



- (b) toxicologically-acceptable basic buffer selected from the group consisting of water soluble potassium and/or sodium and/or calcium hydroxides, ortho-phosphates, carbonates, and/or bicarbonates, to provide a pH of from about 10.5 to about 13
  - (c) optionally, from about 0.0005% to about 3% by weight of calcium ion chelant selected from the group consisting of sodium and/or potassium polyphosphate and/or organic polycarboxylate;
  - (d) optionally, toxicologically-acceptable preservative;
  - (e) optionally, toxicologically acceptable suds suppresser; and
  - (f) the balance comprising an aqueous carrier selected from water and, optionally, containing a low level of low molecular weight, toxicologically-acceptable organic solvent.
9. A composition according to Claim 8 which comprises:
- (a) less than about 0.2% by weight and sufficient to reduce the viscosity of said solution to less than about 50 cp. of toxicologically-acceptable base-stable anionic detergent surfactant;
  - (b) toxicologically-acceptable basic buffer selected from the group consisting of water soluble potassium and/or sodium, hydroxides, ortho-phosphates, and/or carbonates, to provide a pH of from about 10.9 to about 12.5; and
  - (c) optionally, from about 0.001% to about 1% by weight said calcium ion sequestrant.
10. A composition according to Claim 9 which comprises:
- (a) less than about 0.1% by weight and sufficient to reduce the viscosity of said solution to less than about 10 cp., of toxicologically-acceptable base-stable sodium and/or potassium alkyl sulfate and/or C<sub>8-14</sub> soap;
  - (b) toxicologically-acceptable basic buffer selected from the group consisting of water soluble potassium and/or sodium ortho-phosphates and/or carbonates, to provide a pH of from about 11.3 to about 12.3; and
  - (c) optionally, from about 0.01% to about 0.5% by weight calcium ion sequestrant.
11. A composition according to Claim 10 which comprises:
- (a) less than about 0.1% by weight and sufficient to reduce the viscosity of said solution to less than about 5 cp., of toxicologically-acceptable base-stable sodium and/or potassium alkyl sulfate and/or C<sub>8-14</sub> soap; and
  - (c) optionally, from about 0.01% to about 0.5% by weight of sodium tripolyphosphate and/or ethylenediaminetetraacetic acid.

12. A concentrated composition suitable for use in preparing dilute compositions for treating food at a basic pH above about 10.5, by diluting with water using from about 0.1% to about 5% of the concentrated composition, by weight of the dilute composition, said concentrated composition comprising:

- (a) from about 0.1% to about 50% by weight of toxicologically-acceptable detergent surfactant;
- (b) toxicologically-acceptable basic buffer, to provide a pH of from about 10.5 to about 13 in said dilute composition, but with low reserve alkalinity in said dilute composition to avoid damage to a human, the level of orthophosphate, when present, being from about 3% to about 60%, by weight of phosphoric acid equivalent;
- (c) optionally, from about 0.1% to about 35% by weight of toxicologically-acceptable calcium ion sequestrant to control calcium ions;
- (d) optionally, toxicologically-acceptable preservative;
- (e) optionally, toxicologically-acceptable suds suppresser; and
- (f) the balance comprising compatible, toxicologically-acceptable inert and/or minor ingredients.

13. A composition according to Claim 12 which is diluted to be from about 0.5% to about 2% by weight of said dilute treatment composition, and sufficient to reduce the viscosity of said dilute treatment composition to less than about 10 cp., comprising:

- (a) from about 0.5% to about 25% by weight of toxicologically-acceptable base-stable sodium and/or potassium alkyl sulfate and/or C<sub>8-14</sub> soap;
- (b) as the basic buffer, potassium and/or sodium and/or calcium hydroxide, orthophosphate, carbonate, and/or bicarbonate to have a pH in said dilute treatment composition of from about 10.9 to about 12.5; and
- (c) from about 1% to about 10% by weight of calcium ion sequestrant.

14. A composition according to Claim 13 wherein

- (a) said base-stable anionic surfactant is alkyl sulfate and/or C<sub>8-14</sub> soap;
- (b) said basic buffer provides a pH in said dilute treatment composition of from about 11.3 to about 12.3; and
- (c) there is from about 2% to about 20% of said calcium ion sequestrant, which is sodium and/or potassium tripolyphosphate and/or ethylenediaminetetraacetate.

15. A dilute treatment composition prepared by diluting from about 0.5% to about 2% by weight of the composition of Claim 12 with impure water to form a composition which has a viscosity less than about 50 centipoise under shear of greater than about  $1000 \text{ sec}^{-1}$ .
16. A composition according to Claim 15 which has a viscosity of less than about 10 centipoise.
17. A composition according to Claim 15 which has a viscosity of less than about 5 centipoise.
18. The composition of Claim 12 wherein said composition contains from about 0.001% to about 0.05% of an antioxidant.
19. A composition according to Claim 12 comprising only GRAS and/or food grade ingredients.
20. The composition of Claim 12 wherein said composition contains an effective amount of toxicologically-acceptable suds suppresser.
21. The composition of Claim 12 wherein said composition is formed using impure water.

## **APPENDIX II**